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# BUCKEYE NURSERIES

## TAMPA-FLORIDA



Catalogue and Price List  
Citrus Fruits

# Our Terms and Methods

## Terms

Cash with order if for immediate shipment. If for future delivery, 25 per cent advance payment when order is booked, balance to be payable before trees are shipped.

## Applying Prices

Five, fifty and five hundred of one class at ten, one hundred and thousand rates, respectively.

## Packing

We have been packing so long and extensively for foreign shipment that we believe we are safe in saying it would be hard to improve on our pack. We guarantee delivery in good condition, so far as packing is concerned.

## Substitution

In ordering please state whether we may substitute some similar variety in case those ordered are not in stock.

## Shipping Season

We always prefer to wait until the trees are dormant, which, ordinarily, is about November first, and continues to the last of February. It is possible to plant somewhat earlier or later than the above dates, but we consider the dormant period the time *par excellence* for Citrus-planting, and ship only during the growing season at purchaser's risk.

## Proper Labeling

Everything sent out is plainly marked with best quality of printed labels, attached with brass wire.

## Our Guarantee

We guarantee all stock sent out to be well rooted, well grown, true to name, properly packed and shipped according to instructions.

## Liability

While we exercise the greatest care to have trees and plants true to label, and hold ourselves prepared, on proper proof, to replace any that may prove otherwise, we do not give a warranty expressed or implied, and in case of error on our part, it is mutually agreed between the purchaser and ourselves that we shall not at any time be held responsible for a greater amount than was paid for the trees or plants.

## Claims

Every precaution is used against errors, but if they occur we will promptly rectify them if claim be made as soon as the error is discovered. All claims must be made within ten days after receipt of trees, or they will not be allowed.

## In Writing Orders

give Post Office address in full, including County and State. Also point of destination, if different from Post Office address. If your Post Office and shipping addresses are the same, state this fact. Name route by which goods should be shipped, if there is any preference, and they will be marked and billed according to instructions. State whether shipment by freight or express is desired.

**BUCKEYE NURSERIES**

**Tampa, Florida**





ESTABLISHED IN 1880

*Largest Nurseries in the World  
Devoted Exclusively to Citrus Fruits*

**M. E. GILLETT, PROPRIETOR**

OFFICES:

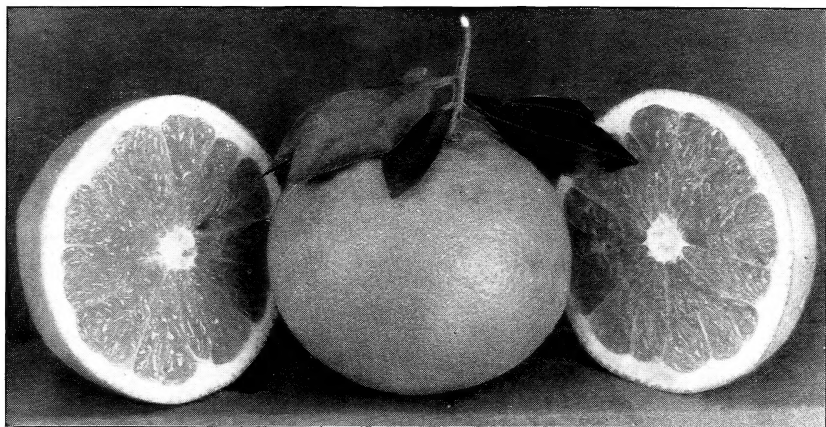
Suite 1018, Citizens Bank Building

**TAMPA, FLORIDA**

Cable Address: Gillett, Tampa



Panoramic view of Citrus grove from roof of Florence Villa Hotel, near Buckeye Nurseries



## Foreword



SOMETHING over thirty years ago the Buckeye Nurseries were started in Marion County. It was a very modest beginning, a sincere effort to meet in a small way the demand of progressive, far-sighted orange growers for better-quality trees—trees they could depend on not only to grow vigorously but to be absolutely true to name. Today the Buckeye Nurseries, now located at Winter Haven, are undoubtedly the largest nurseries in the world devoted wholly to Citrus Fruits.

This achievement is the result of three things—unbounded faith in the future of the Citrus-Fruit industry in Florida, the integrity of high ideals in all our business dealings, and steadfast adherence to the rule that every Buckeye tree shall be representative of the very best of its type. We take pride in the knowledge that Buckeye trees have long been recognized as standard in every part of the Citrus belt, and that they have had no small part in establishing orange- and grapefruit-growing as the most important industry in Florida today.

In the preparation of this handsome new catalogue we have endeavored to make it more than a mere price-list. In it are embodied not only the results of more than a quarter of a century in growing nursery stock, but the practical information to be obtained only by growing fruit commercially, and intimate association with every phase of the industry from the nursery row to the placing of the fruit on the northern market. In short, we have tried to make of it a handbook of value and help for the experienced grower, as well as for the man who is starting his first grove, and the home gardener.

Buckeye trees are “quality” trees. It is on the “quality”—the vigor and absolute trueness to name—of the trees sent out in the past that has grown the reputation which has resulted in a demand that requires more than a million trees to meet. And every one of this vast number has been grown as carefully and painstakingly as when our nurseries held less than a tenth of that number.

For the convenience of our customers, we handle all kinds of deciduous and ornamental trees and plants for the South, having arrangements with the best growers in the state from whom to secure our supplies. If you have need of such for your home grounds, we shall be glad to serve you.

A cordial invitation is extended to you to visit our nurseries at Winter Haven, and see for yourself just how Buckeye “quality” trees are grown, packed and shipped.

**M. E. GILLET, Proprietor, Buckeye Nurseries**



150,000 Rough Lemon Seedlings

## The Story of An Ideal

This is the story of the Buckeye Nurseries. It is the story of what are, probably, the oldest nurseries in Florida devoted exclusively to Citrus Fruits, and what we believe to be today the largest exclusive Citrus Fruit Nurseries in the world. It is the story of persistent faith in the future of a great industry which has been brought to disaster by untoward conditions. In so far as the record in concerned, it is also the story of the Citrus industry of Florida, its rise and fall, and resurrection to still greater magnitude.

In 1880, when the Buckeye Nurseries were first established, Florida ruled the Orange markets of America. A Florida grove in bearing was considered security second only to government bonds. The golden fruit was as real and tangible wealth as the pay-dirt of the California mines. Even in the northern states banks were loaning freely on Orange-grove security.

Under these favorable conditions the Buckeye Nurseries were started at Weirsdale, in the southern part of Marion County. The location was selected in the belief that it was far enough north to produce strong, vigorous trees, yet sufficiently far south to be well below the line of danger from frost. The wisdom of this choice seemed fully established by the comparative immunity from serious cold during the next few years. The business grew rapidly. Buckeye trees became known all over the state for high quality, strength and vigor.

Then in 1894-95 came the overwhelming disaster still spoken of as the "great freeze" which plunged the old Florida into ruin, but actually laid the foundations for the new and better Florida of today. With mature trees killed to the ground it was inevitable that our young nursery stock should suffer.

The situation was desperate; ruin and despair gripped the entire state. The cry that the Orange-growing industry in Florida was ruined forever became almost universal. We did not believe it. We insisted that the disaster was an abnormal condition likely to happen not oftener than once in a century. Despite our own heavy loss, our faith in the future of the Florida Citrus industry remained unshaken, and we at once re-established the Buckeye Nurseries.

The Nurseries were this time started at a point considerably farther south. This proved no better than the former location. While groves could be grown there, young nursery stock was too tender to withstand, without injury, the occasional frosts visiting this section. At once we began a systematic search of the state, with study of local conditions of climate and soil. It involved growing experiments in many places. We were not content to take any man's word; we tested for ourselves.

# Tampa, Florida

Finally, among the lakes of Polk County, we found what we believed, and since then have proved to be, the most ideal conditions in Florida for the growing of Citrus nursery stock. Our Nurseries were moved to Winter Haven, which is in the heart of the lake region, in the year 1903, where they have remained.

The elevation, over 200 feet above sea-level, combined with wonderful air-drainage, directly due to the many lakes on all sides, have proved from the beginning an absolute insurance against frost, not so much as one tree having been lost from this cause since the Nurseries were established here. Moreover, the soil is peculiarly adapted for the best growth of Citrus stock. It is a deep, warm, sandy loam; the kind of soil wherein a young tree produces a great mass of fibrous roots. Such a root-system is the first requisite in young trees for planting. Given this, and reasonable care after they are set out, and immediate, vigorous growth is certain to follow.

Gradually the Orange industry began to recover from the great disaster. With the increase of new plantings the demand upon the Buckeye Nurseries became so great that each year additional acreage was set to young stock. Believing that the production of the stock itself is only the first essential in a Nursery business, and that packing and shipping are equally important, these two subjects were given the closest study. The year the first shipment of trees was made from the Winter Haven Nurseries we built the most complete and best-arranged tree packing-house in the state, a two-story building, 60 x 80 feet,

Water is piped into the packing-house from a six-thousand-gallon tank, supplied from an irrigation plant at a nearby lake. By this means it is possible for us to keep the roots of trees constantly moist. The most vigorous trees in the world may become so damaged by carelessness in handling that they will be years in recovering, or may never recover at all. Citrus roots cannot stand exposure to the sun; no more can they stand exposure to drying winds. When you have the combination of both, as is so often the case in Florida, an exposed tree may be damaged beyond measure in a very little while. It was with this knowledge in mind that this modern packing-house was built.

With the utmost care to shelter them from sun and wind, the trees are lifted in the Nursery and rushed to the building. As soon as they are within, the doors are closed that no draft of air may reach them. They are then sprayed, and experienced packers put them into the boxes. The roots are carefully packed in damp cypress shavings, the latter having proved to be the best packing-material with which we have ever come in contact.



Budded Seedlings, each tree tied to a stake



One-year-old Grapefruit trees

As soon as a box is filled it is marked, weighed, and trucked into a car on our own private siding. Thus Buckeye trees go from the Nursery to car with a minimum of exposure. Our method of handling is more costly than the old method, but it's the "Buckeye way," and we have the satisfaction of knowing that our trees go out in the best possible condition, and the proof of this lies in the fact that it is seldom we receive a complaint from our customers. Buckeye trees are grown to **live**, and if, after planting, one of them dies, it will usually be found that the cause lies in the conditions which the tree is called upon to meet, and not in any lack of vitality in the tree itself.

We believe that today the Buckeye Nurseries are the largest in the world devoted exclusively to Citrus stock. From the beginning we have devoted our attention **wholly** to Citrus Fruits, believing that, in this way, we could give our customers better trees and better service than if we divided our efforts over many different lines. We have studied the commercial groves, not only in every part of Florida, but in Cuba, Jamaica, and California, for the sole purpose of producing those varieties best adapted to Florida conditions and the demands of the northern markets. We are ourselves commercial growers of Oranges and Grapefruit. We know the soils and the climatic conditions in all parts of the state, and are, therefore, in a position to aid the beginner with advice as to varieties and stock best adapted to the location which he may have chosen.

## Quality of Stock Essential to Success

No matter how good your soil may be, no matter how perfect your climatic conditions may be, no matter how much attention you give to fertilizing and spraying, you cannot have a good Citrus grove if you start with poor stock. There is an old saying, "blood will tell." This is just as true in plant-life as in the animal world. **Blood will tell.** If you set inferior stock, no amount of care and attention will ever make of those trees anything but an inferior, undesirable grove. It is as essential for you to know the character of the young trees you are putting in your grove, as it is for the stock-breeder to know the pedigree of his animals. A grove of young trees of good quality in a poor location, with every condition against them, is a better proposition than a young grove of poor trees with every other condition in their favor.

## Tampa, Florida

In locating our Nursery at Winter Haven we found what we believed absolutely the best location in America for the growing of Citrus nursery stock. We have not changed that opinion. For years we have done a tremendous business in Cuba, and the question has many times been asked us, "Why don't you start a nursery in Cuba?" Our reply invariably is, "because we believe that we already have the best nursery location in America." The reasons for this belief are as follows: In Cuba the soil is naturally rich. From the day the seed sprouts it has ample food within easy reach. The result is a small root-system. The young tree is like the pampered and over-fed child. Its every want is right at hand. It does not have to struggle, and, therefore, it becomes weak in its powers of resistance, lacking in vitality and vigor.

On the other hand, in the warm, sandy loam of Polk County there is sufficient food for vigorous healthy growth, but the roots have got to go after it. The result is that the young plant begins to hustle from the day it bursts from the seed. There is not food-supply enough within reach of a mere dozen roots; it must put forth a multitude of roots in order to secure all that it needs. The result is a perfect root-system, a mass of fine rootlets penetrating the ground in every direction. The tree itself becomes strong and vigorous. Its vitality enables it to resist disease and insect attacks. Its activity, in order to live, gives it the vitality which makes for long life and productiveness. Transplanted to richer soils the tree is in a position to make the most of the favorable environment, and do it with a vigor which shows its result in heavy crops.

We cannot, therefore, too strongly urge attention to this important detail of securing quality in trees. On the trees of today is staked your entire investment of the future. In price it may be a matter of a few cents per tree today. Five years from today it will be a matter of dollars per tree. Don't forget this.

Insist upon quality, deal only with nurserymen of established reputation, whose honesty and reliability no man may question. Never under any circumstances buy a tree because it is offered to you cheap. Deal with the men who guarantee their stock and whose business reputation makes that guarantee good.



Box of two-year Grapefruit trees ready for shipment





Planting Buckeye trees at Lucerne Park

## Our Citrus Stock and How it is Grown

In the old days, before the famous freeze, most of the Orange groves were what is known as "seedling groves." Today, nearly all new groves are budded or grafted trees. The question at once arises with the grower, "on what stock or root shall I plant?" Opinions on this matter are as varied as on the politics of the day. Planters of large experience, with groves running into many acres, not infrequently are on opposite sides of the fence on this important question of root-stock. It is a question which every man must settle for himself, after a study of the conditions of the location where his grove is to be.

Four kinds of stocks are in general use: The Rough Lemon, the Grapefruit seedling, the Sour or Wild Orange, and the Trifoliata. Each of these has distinctive characteristics. Each is adapted to special conditions. No nurseryman can honestly come forward and say that any one of these stocks is adapted to all conditions or universal use.

### ROUGH LEMON STOCK

This is, like the Sour Orange, native to Florida, Cuba, Porto Rico and Jamaica. We have seen it growing wild in all of these countries. After over thirty years' experience with the various stocks, we have come to the conclusion that it is as disease-resistant as any stock we have, and that the man having light or sandy soil should tie to it absolutely if he desires quick results and heavy crops.

Some growers claim that this stock has a marked influence on the fruit, but that this is true the best authorities find it difficult to say. Be this true or not, a great body of growers prefer it to all other stocks for Grapefruit and Oranges of all kinds. It is fully as resistant to mal-di-goma, or foot-rot, as is the Sour Orange, and hardy enough to be planted safely where any root except Trifoliata will thrive. We want to emphasize the fact that under no conditions should Rough Lemon stock be planted in low, wet or badly drained lands, but for the matter of that neither should any other stock.



# Buckeye Nurseries



Catalogue  
and  
Price List  
Citrus  
Fruits

Tampa, Florida

## Buckeye Planting Service



FOR many years Buckeye Nurseries have been confronted with the problem of bettering conditions and getting in closer touch with the planter—the man whose future depends on our trees.

The most serious problem of the newcomer is to decide of whom he shall purchase his trees, to whom he shall look for experience in planting, or who shall plant the trees and get him started on the right road to success.

We have always guaranteed our trees to arrive at destination in good condition, and very often stated we would guarantee them to live after planting if we were assured that they were properly planted and would receive proper care thereafter. It requires no science or secret process to produce a Citrus-grove, provided the planter starts with strong, vigorous, hearty, true-to-name stock and that his stock is properly planted.

One can readily understand that, in doing business with thousands of customers annually, we find our trees are handled in as many different ways. Many growers plant their trees too low, and trees thus planted do not do well. Often the nurseryman is blamed for furnishing inferior stock, when really he is not at fault. To overcome all this, we have inaugurated our guaranteed planting service, which briefly is as follows:

When any one customer purchases a large number of trees, or number of customers in the same locality club together and book their order for a sufficient number of trees to warrant it, to be planted at the same time, we will send our planting crew to their lands and plant their trees—and with each tree so planted goes our guarantee that this tree will grow.

Our charge for this service is nominal, barely covering cost of labor—depending on distance land is situated from Winter Haven, Polk County. Planters are required to have their land in readiness and staked. We dig the holes, plant the trees, and leave a cup around tree ready for watering, which must be done by the planter.

By adopting this method of getting started, a newcomer takes no chances, for, under the conditions of our guarantee, we replace any trees which die—the guarantee having a limit of four months from date of planting. With the right tree properly planted, more than half the battle for success in Citrus-Fruit growing is won at the very beginning.

## GRAPEFRUIT SEEDLING STOCK

This stock is obtained by planting the seed of the Pomelo, or Grapefruit. In many sections, notably in the extreme southern end of the state, growers will have nothing else. One advantage this stock has over all others is its ability to hold its fruit. No Grapefruit holds on the tree as well, or retains its juice and flavor so late, as does the Florida Seedling, and these facts commend it to a great body of growers. There are, however, so many good reasons for not planting seedlings in a grove that we have for years practised budding a large proportion of our Pomelos on Grapefruit Seedling roots, thereby getting rid of the objectionable thorns, reproducing the particular variety wanted, and getting the advantage of rapid growth, as in this respect it stands next to the Rough Lemon, and also preserving the "hang-on" quality. We have tried Grapefruit stock under all conditions, and, all things being considered, we find that it holds its own with any—about as hardy as the Sour Stock, an exceedingly quick grower, makes a strong root-growth, and is in every way satisfactory.

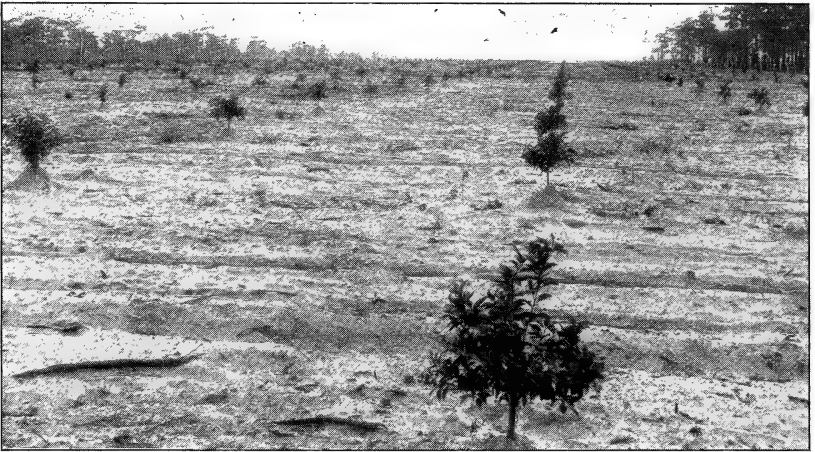
## SOUR ORANGE STOCK

The Sour Orange is the native or wild seedling. It is indigenous to many parts of Florida and to Cuba, Porto Rico and Jamaica. During the early years of Orange-growing in Florida most of the nursery stock came from these seedlings, which were found chiefly in the hammocks. Groves started from this seedling stock, on soil and under conditions similar to those from which the stock was taken, thrive. On the other hand, the Sour Orange transplanted to light, thin soils was a disappointment.

The Sour Orange stock today has the advantage of being, next to Trifoliata, the hardiest of all the varieties or species of Citrus trees. It produces abundant root-growth, penetrating well into the soil. It is strongly resistant to the attacks of the mal-di-goma, to which the Sweet Orange is, on the contrary, very subject. On high and low hammocks, and all soils liberally supplied with moisture, it is a good stock, especially in such sections as may be subject to frequent light frosts. On low wet, or on strong and heavy soils, the Sour Orange stock is one of the best; but on light soils (and soils of this character predominate in Florida), it is a failure because of the extreme slowness of growth.



Making cups and watering trees when planting



Portion of six-months old grove planted with Buckeye trees

### TRIFOLIATA STOCK

This is the hardiest member of the Citrus family. It reaches its maximum development in a comparatively cold climate, and has been known to withstand a temperature below zero. It has the power to transmit, to a certain degree, its frost-resistant powers to the bud, and for this reason it is a favored stock for those varieties which are grown in the northern limit of the Citrus belt, as in north Florida, Georgia, Louisiana and Texas. As a stock for the southern Citrus belt we find nothing in it to recommend. In those sections where only the Satsuma, or equally hardy Oranges, can be grown, Trifoliata stock is a success, inasmuch as it tends to increase the cold-resistant powers of the bud, in that it remains dormant when frosts are most to be feared. We are prepared to furnish Trifoliata stock for those sections to which it is best adapted.

### SWEET ORANGE STOCK

The Sweet Orange was at one time used exclusively in California and also largely in Florida. The appearance of the mal-di-goma, or foot-rot disease, which attacks and finally destroys practically everything budded on this root, has resulted in its discontinuance to a large degree. On light, well-drained soils, trees worked on this stock make a rapid growth.

### HOW OUR STOCKS ARE GROWN

All of our stock is grown by us with the utmost care to produce strong, vigorous root-systems. The seed is sown in beds in rows much as other seeds are sown. They are given frequent cultivation and then, when high enough, are transplanted to the nursery row proper. These rows are sufficiently far apart to allow of easy cultivation. The young stock is grown by us for two years in the nursery row before budding. Many nurserymen offer trees not over one and one-half to two years old from the seed, and these are taken readily by inexperienced buyers who are influenced by the low price, but have yet to learn the difference in results. It is not the first cost of a tree that usually counts, but how soon it comes into bearing and how thrifty it is found to be.

## THE AGE OF ROOT

We cannot emphasize too strongly the importance of this question of the age of the rootstock. It is a rule of nature that a tree must be of a certain age before it can bear fruit. This age varies according to the kind of fruit. Thus peaches bear very young, while apples and pears require several years longer in which to become productive. In the case of budded Citrus trees, it must be obvious to everyone that the tree itself cannot be stronger than its root-system. Therefore, one cannot expect the young tree to blossom and bring forth fruit when it has a rootstock of only two to three years of age. On the other hand, given a rootstock three and a half to four years old and the young tree will bear a year or two sooner, and in greater profusion. We have seen seedling Oranges bearing quite full in Cuba at the fifth year, and budded trees bearing two years from planting. This early bearing, however, is due to the richness of the Cuban soil, and to the fact that both roots and trees make prodigious growth in a short time and grow continuously, there being no really dormant period, as in Florida. In Florida a good, strong bud on a three- to four-year root will show a fair crop the third year, but a heavy crop cannot reasonably be expected until the fifth or sixth year.

Grapefruit, which is a more rapid grower, will frequently produce a paying crop the third year after planting, if heavily fertilized and well cared for. Many planters, especially beginners, make the mistake of buying a small tree because it **looks** cheaper; but experience has proven that the larger tree is in the end much cheaper. To illustrate: We have in mind a forty-acre Grapefruit grove which we planted for a customer. Four thousand trees were planted; 2,300 were small buds, two- to three-foot grade; the remaining 1,700 were strong, five- to seven-foot and two-year buds. The third year after planting 1,400 boxes were shipped from the 1,700 trees. The next year the Grapefruit crop was short but the 1,700 trees produced 1,000 boxes, and in the fifth year were loaded with an enormous crop. The 2,300 trees are just showing some scattering fruit, and, while it cost just as much per acre to care for and fertilize these small trees, the results are all in favor of the larger and, what has proven to be, the **cheaper** tree. Our more than thirty years' experience forces us to reiterate that in planting Citrus trees the **best** is always cheapest.



Portion of one-year-old grove of Buckeye trees

# Buckeye Nurseries



Portion of two-year-old grove—more Buckeye

Our seedlings are grown one year in the seed-bed; they are then transplanted to nursery rows and grown there for two years, at which time they are large enough to produce a heavy bud growth. They are then budded, and the bud is grown a year, thus making the tree, or root, four years old when ready to dig. The strong, vigorous character of our rootstocks is shown in one of the accompanying illustrations, where budded stock tied to a stake is shown. It will be noted that this stock is already 4 feet high, yet at the time the photograph was made it represented not over three months' growth. Please bear in mind that this splendid growth is not the result of forcing with fertilizer. It has always been a cardinal principle with us never to "stuff" or over-feed a tree. Believing that by such processes a tree is weakened in vitality, we prefer to let our trees come along in the more natural way. It takes a year longer to put them on the market, but we have the satisfaction of knowing that that year of age is bound to tell in the future development of the tree.

It costs us more to grow our trees as we do than if we should force them and market early. The extra time that they are in our Nurseries is a direct expense to us in care, cultivation and feeding. Still, our prices will, on comparison, be found no higher than those of our competitors, and, under our system of grading, we believe that we are supplying a better tree for the same money, and the quality of the trees planted has as much to do with the ultimate success of the grove as anything else—indeed, on this point often depends success.

## GRADING

Grading of nursery stock is done by height, qualified by giving the approximate caliper of the different grades. This method is now universal among the leading nurserymen of the state. When so desired, we ship trees with tops left on, but do so at the purchaser's risk. We advise all our customers to allow us to cut back all trees before packing, so that top and root will be well balanced. A tree can do well only when the top is cut back in proportion to the loss of roots when the tree is dug. This loss is always considerable, and it is absolutely essential that there should be a corresponding reduction of top. No one is better able to judge the right proportion between crown and root than the nurseryman who has dug the tree, and knows what the root-loss in the digging actually is. Buckeye Nurseries have earned an enviable reputation in this respect as in so many others—and it will be lived up to.

## How to Plant and Care for a Citrus Grove

While our sales year by year have been largely to experienced growers, there has been a constant increase in the number of small growers who plant from five to ten acres and up. Many of these are men without experience in the growing of Citrus fruits, often Northerners who have come to Florida with the idea of establishing permanent homes here. Invariably these customers ask for our advice as to culture and care of groves. These inquiries have increased to such a degree that it has seemed best to us to incorporate in this catalogue brief, clear directions for the setting out and care of a grove, with brief descriptions of the diseases and pests to which Citrus fruits are subject.

The Orange is one of the most adaptable of all fruits. While to do its best it requires certain soil conditions, it will do fairly well under radically differing conditions. Successful commercial groves are to be found in almost every section of Florida except in the extreme north. The soil conditions are as varied as the other characteristics of these sections. Despite this the Oranges are doing well. They have adapted themselves to the changed conditions, and, with care and attention, are proving profitable.

In general, it may be said that Oranges do best on high hammock and high pine lands. They do almost equally well on flat woods land and low hammock, providing that the latter is well drained. This matter of drainage is one of the most essential things in the selection of Citrus land. Wet feet are almost as fatal to Citrus fruits as to the man with pneumonia. As a rule, Oranges and Grapefruit do best in a light, sandy loam, not too rich, with a subsoil through which the tap-root can penetrate.

High pine land, whereon the stand of long-leaf pine is of large size and shows vigorous growth, is almost always good Citrus land. High hammock land which will almost always have a vigorous growth of water- or live-oaks, along with pines, is equally good. In both cases it is well to make borings to find out if there is any hardpan underneath. Unless hardpan can easily be broken up, it is a mistake to set a grove where this prevails to any extent, within two feet of the surface. We are aware that, in offering these suggestions as to the selection of land we are quite beside the mark with many of our customers, inasmuch as many of them may have already secured their land and are seeking trees adapted to the conditions which confront them.

It is best, under all conditions, to clear the land wholly before planting.



Three-year-old grove from which one box was taken from each tree. Still more Buckeye

# Buckeye Nurseries



Four-year-old grove. Everything Buckeye. Note strong development of the trees

We know that this is contrary to the practice of a few growers, but we believe, nevertheless, that the best results are obtainable when the land is thoroughly cleaned. In our own commercial groves we follow this practice absolutely. Furthermore, it is best that the land should be put under cultivation for at least six months before setting to trees. Our plan is to clear the land of all timber and brush as long as possible before the grove is to be set out. The ground is plowed, harrowed and leveled, and then, wherever possible, a cover-crop is planted. By adopting this plan the soil is opened up, nitrogen is added if the cover-crop be a legume, and the soil is put into a mechanical condition which will insure a rapid growth of the young trees when they are set. At the same time, while the above practice is best, thousands of acres have been planted on newly cleared land, which are today among the best groves in the state.

Beggarweed, velvet beans or cowpeas are the cover-crops we prefer. If it develops that the soil is a little sour, use lime or good-grade hard-wood ashes harrowed in lightly. If it chances that your land is not high, try throwing up the soil into ridges in such a way that drainage can be had through the water-furrows, planting trees on the ridges.

## TIME TO PLANT

During the late fall, generally about November 1, trees in Florida have completed their growth for the year. As a matter of fact, they virtually go to sleep until spring. There is no sap moving, and the bark and limbs are firm and well matured. This is unquestionably the time to transplant from nursery to orchard. It is nature's own answer to the question, "When shall I plant?" It is the one season when conditions are favorable for the handling of young trees. The danger from exposure to sun and wind is reduced to a minimum. The weather is cool, and the land into which the trees are to be transplanted is just as it should be—cool and moist. These conditions assist the roots to heal, or callous over, which must be done before new roots can start.

Some planters argue that it is best to wait for the rainy season, as then no



# Tampa, Florida

water is required during planting. Our own long experience proves to us conclusively that the small expense of watering at the time of setting out is repaid many times over by the more vigorous condition of the tree when it starts its spring growth. We have experimented extensively with these conditions, and the results have proven that young trees, full of new growth and sap, as they are in the spring, are not in the best condition for setting out. We go on record as being opposed to unseasonable planting. The grower who plants in December, January or February will make no mistake.

Location should determine also the time of planting. In Cuba, for instance, a tree could safely be planted in November, as the climatic conditions do not have to be taken into consideration; but the same tree planted at that time in Florida would make a small top-growth before winter, and a light frost, which would not injure the mature tree either in nursery or grove, might nip this tender growth. For this reason, late December, January or February plantings are safest. Trees planted during the rainy season run about the same risk, as it stands to reason that the wood cannot ripen and mature in three months so much as it can when it has a full season's growth.

The distance apart at which Orange and Grapefruit trees should be set is still a mooted question. A few years ago there was a tendency to reduce the distance between trees. There now seems to be a tendency to increase the distance rather than decrease it, and this for several very good reasons. In the first place, there should be ample room for the harvesting operations. In the second place, the greater the distance the more room each individual tree has for its growth. There seems to be now a general tendency to plant Oranges and Grapefruit at from 25 to 30 feet. A few are still planting at 20 feet, but this is, in our opinion, too close. We believe that an acre planted with trees 25 feet apart will give larger returns than an acre planted 20 feet apart, despite the increased number of trees in the latter. The distance should never be greater than 30 feet, and, probably, 25 will be found to be the happy medium.

As heretofore stated, we prefer to ship trees cut back before packing. We know what the root-growth was, and what the proper balance of top should



Portion of seven-year-old grove. Noted Buckeye planting at Winter Haven



Grapefruit ready for packing-boxes

be. If you buy your trees with the full crown they must be cut back and defoliated (which defoliation is now required by state law) before putting them in the ground. Do not work in such haste that the work is not well done. If your trees are forced to stand a day or two after arrival, do not worry. Trees packed at our Nurseries have stood in the boxes for nine weeks with practically no loss. This is, of course, an excessively long time, and we quote the incident only to emphasize the fact that undue haste in getting the trees into the ground is not necessary.

An Orange or Grapefruit tree should not be planted too deep. This is an error which many beginners make. The Orange is a surface feeder; the same thing is true of the Grapefruit. It is better to have the trees set several inches too high than one inch too low. When planted as they should be, they stand slightly above the general level of the land and all excess moisture drains off. When planted too low, a basin or cup is formed about the tree. This will hold water for days in the wet season, and water held about the roots of the Orange tree is disastrous. A tree should never be set deeper than it stood in the nursery.

The surface-soil and subsoil should be kept separate, the former being put back first when filling up the hole. As before stated, we believe in watering plentifully at the time the trees are set, as nothing can pack the soil around the fibrous roots as well as water. Of course, this is absolutely necessary in certain seasons; but we believe that the trouble and expense is amply repaid in results even when the ground is wet. It is a good plan to mulch the surface about the tree with grass and dead leaves to prevent evaporation.

## CULTIVATION

Clean cultivation during the dry season, with a cover-crop during the wet season, is the best practice. There is such a thing as too much cultivation. Under the direct rays of the sun, as we have it in Florida, soil may become so scorched and burned that there is no life in it. In other words, the humus is burned out of it. This result will often follow too frequent cultivation. The best cultivator then is a mowing-machine.

During the dry season the trees need every bit of moisture in the ground, and the frequent stirring of the soil prevents evaporation. The dust-mulch which forms on top prevents the moisture below from reaching the air and evaporating, and the trees have the opportunity to draw upon this. During the wet season, however, conditions are reversed. The soil is then filled with moisture, many times in excess of the amount needed by the trees. It is our practice to sow beggarweed, velvet beans or cowpeas as a cover-crop at this season—preferably beggarweed. These crops should be allowed to ripen before being plowed in. If plowed in green they are likely to make the soil acid. Not only do they give nitrogen to the soil, but form humus in the most available form.

After the cover-crop has been turned under in the fall the ground is left fairly clean, preventing the frequent fires which occur where groves are left all winter full of dead grass and other inflammable material. No grass or crops should be allowed nearer than 10 feet to the tree, and frequent stirring of the soil about the tree with hoe or rake will be found very beneficial.

On the whole, cultivation should be shallow rather than deep. Its principal purpose in a Citrus grove is the conservation of moisture.

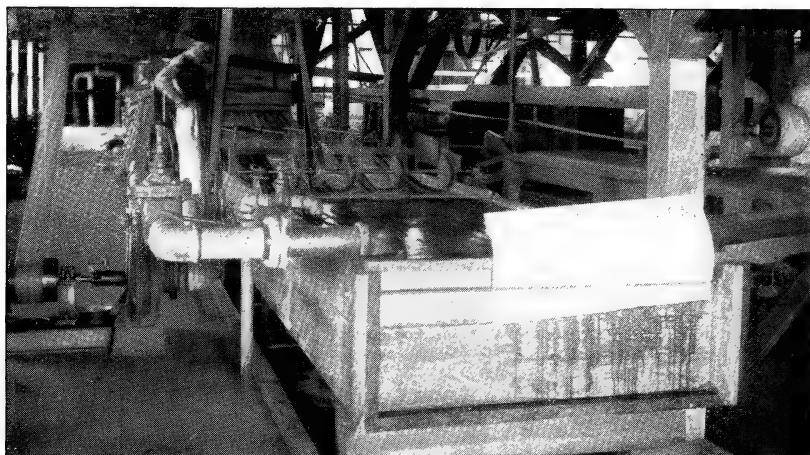
## FERTILIZERS AND THEIR USE

The subject of fertilizers is a broad one. No hard and fast rule that will fit all localities can be laid down. In general, it is best to go about among the growers in your vicinity and find out what they are doing in the matter of fertilizer, and what results they are attaining under conditions similar to those which prevail on your own place. It makes a difference whether your land is high hammock, high pine, low hammock, flat woods or prairie. Study the methods used by the successful growers among your neighbors, and use a complete fertilizer—one-sided fertilizers are bad. While your horse needs oats or corn it also needs hay; your tree, likewise, needs a complete ration.

As a rule we do not apply fertilizer when the young tree is set out. We pre-



Heavily loaded Grapefruit tree



Washing Oranges at Winter Park, Fla., in packing-house of Florida Citrus Exchange

fer to wait two or three weeks and then apply on the surface about one pound of high-grade special Orange tree manure to each tree, well raked in; this is the safe method for the beginner. Many take issue with us on the amount of fertilizer we use. Our experience extends over thirty years, and carefully conducted experiments have convinced us that in the thin, sandy soils of Florida an Orange tree will stand much more fertilizer than it usually gets. The very nature of the Citrus soil is such that it cannot well hold for any length of time the fertilizer applied, and there must be loss by leaching. We believe that, beginning in March, one pound of chemical fertilizer should be applied to each tree every six or eight weeks. It should be practically free from organic matter, as too much of this will cause die-back. These applications can be kept up until October, when the tree should become dormant and take the rest nature provides. The amount of fertilizer should be increased from year to year, and the formula changed, as the age and requirements of the tree demand.

## IRRIGATION AND SPRAYING

Irrigation and spraying in many sections is sometimes necessary. In others, notably in the high lands of the lake region, irrigation is not required, although often desirable. In the flowing-well section this problem is a comparatively easy one. In those sections where the rainfall is not sufficient, and where irrigation is impossible or difficult, it is foolish to attempt to start a Citrus grove. Unless an Orange tree has ample water it will not make a normal growth, and the young fruit falls off, while such as is brought to maturity is deficient in juice and of inferior flavor and quality.

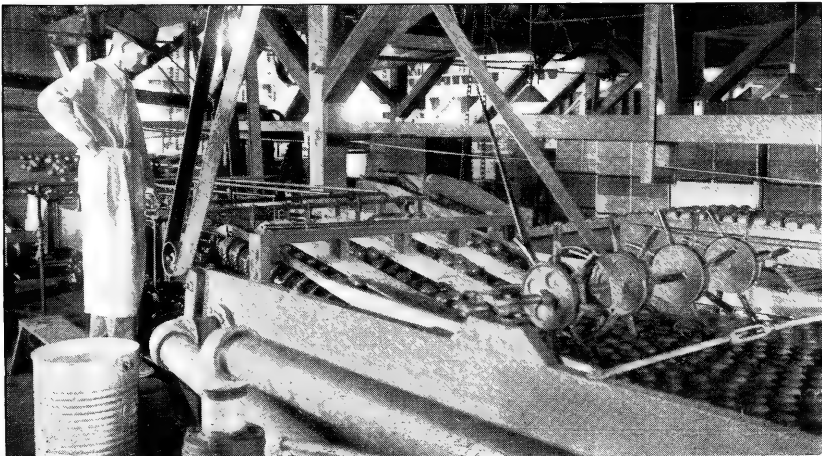
The northerner, coming into Florida to start an Orange grove, often fails to take into his calculations the fact that with the Citrus tree transpiration is taking place the year round. With deciduous fruits there is practically no transpiration during the season of rest. The Citrus tree, however, retains its full complement of foliage, and this, of course, means continual transpiration.

Sub-irrigation by means of tile or perforated pipe is in use in some groves. But because of the tendency of the fibrous roots to plug the drain-tile used, it is customary in most places to use iron pipe. Soils provided with a compact clay subsoil, 18 or 24 inches below the surface, may be well irrigated by the furrow system.

## PESTS AND DISEASES

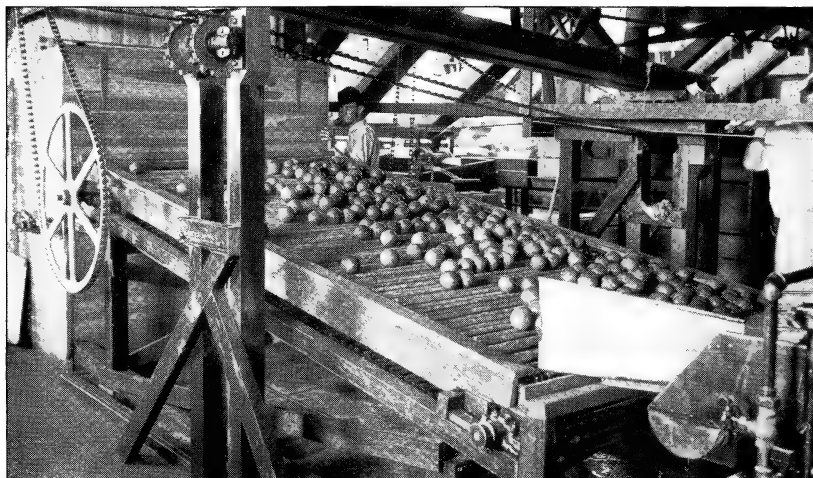
In Orange-growing, as in every other business, continual watchfulness is the price of success. Like all other fruits, Oranges and Grapefruit are subject to diseases and pests of various sorts. But also, as is the case with all vegetable and animal life, the more vigorous the animal or tree the more easily is disease warded off or insect pests handled. We doubt if a grove of Citrus trees was ever grown in which some of the common insects incident to the Citrus family could not be found. Yet, if the trees are vigorous, robust specimens with splendid circulation, a few scale can do them no particular harm, as the tree can successfully resist attack. But starve the trees, refuse them the attention they require, and at once the pests begin to multiply. Take for illustration a herd of cattle. Lice or ticks do not trouble the big, healthy specimens, their vigor and strong circulation making them practically resistant; but if there is a sick, hide-bound steer in the bunch these cattle pests will in time kill it, as its vitality is too low to resist them. So it is with your trees—feed them intelligently and cultivate properly, and the ordinary insects need have no terrors for you. Our trees in the Nursery are as clean as it is possible to grow them; they have all been passed by the State Inspector, and yet every tree we ship, before it goes to the packer, is washed with a solution which insures that they go to our customers clean. We also have the assistance of one of the best experiment stations in the United States in handling insect pests and plant and tree diseases, and with reasonable care and diligence on the part of the grower, they can be controlled. The government has done much in the way of securing natural enemies of insect pests, and in this way and with intelligent effort on the part of the grower, the eradication of the more dangerous pests is merely a question of time. Eternal vigilance is the price of a good grove—were it **not** so, **everybody** would have one—therefore, when you plant your grove, start with clean, vigorous stock, be watchful, feed generously, cultivate properly, use intelligence, and insect pests will give you no cause for worry.

The Citrus family has fewer diseases than some other groups of fruits. However, there are enough to keep the grower continually on his guard. Many of these diseases are due to the attacks of fungi. All parts of the tree—roots, stems, branches and leaves—are subject to these attacks. Diseases of this



Elevator to brushes, Winter Park, Fla.

# Buckeye Nurseries



Oranges going into dryer, Winter Park, Fla.

nature are called fungous diseases. Fortunately, however, most of these troubles may be reached by spraying, but this spraying, to be effective, must be done at the proper time. The State Experiment Station, at Gainesville, Fla., will furnish, on application, bulletins containing all necessary information.

One of the most widely distributed diseases in Florida is the "die-back." No locality is exempt from it—no variety free from its attack. It is easily recognized and handled. The young twigs die back several inches. On the fruit the disease is manifested by the appearance of dark brownish blotches and by cracking or splitting. It is most frequently produced by unsuitable fertilizer or by poorly aerated soil. The appearance of this disease should be the signal for a thorough study of the soil and the methods of fertilization.

The number of times a grove should be sprayed is largely a matter of local conditions, the diseases or pests which have a foothold in the vicinity, and the frequency of rains during the spraying season. It is obvious that rain, especially such heavy rains as prevail in Florida, will quickly wash off any spray.

## What Varieties Shall I Buy

This question is asked us so frequently that we anticipate it from every new customer. We do not believe in any man putting all his eggs in one basket. It is not sound business. Therefore we advise not only several varieties of a given fruit, but more than one kind of fruit where the soil is adapted for it. Thus we do not believe in planting the full acreage in either Grapefruit or Oranges. We have been making extensive commercial plantings in Polk County, where the Grapefruit grows at its best. Where our advice has been heeded, these plantings have been made half in Grapefruit and half in Oranges. With the present trend of the market, a given area of Grapefruit undoubtedly will give a larger net return than a like area in Oranges. But, take it year in and year out, we believe that the man who splits up his planting will have less to worry over, and will average up in net returns with the planter who sticks to one thing only. The latter assumes twice the risk of the former.

As to choice of varieties here, again, locality is a governing factor. In regions subject to frost the earlier varieties are best, particularly those which

# Tampa, Florida

combine early ripening with hardiness of tree. The Satsuma is a notable example of this type of Orange.

The wise plan is to find out what varieties do best in the locality you have chosen and be guided by this. If you are in a locality which will carry fruit through the winter with a minimum risk, by all means divide your planting into medium-early and late varieties, thus giving you a marketable crop the season through.

We advocate a small planting of Tangerines with other varieties. These little "kid glove" Oranges are in staple demand, and they can be handled with the remainder of the crop so easily that we advise setting out a few trees.

Varieties of both Oranges and Grapefruit are fully described elsewhere in these pages.

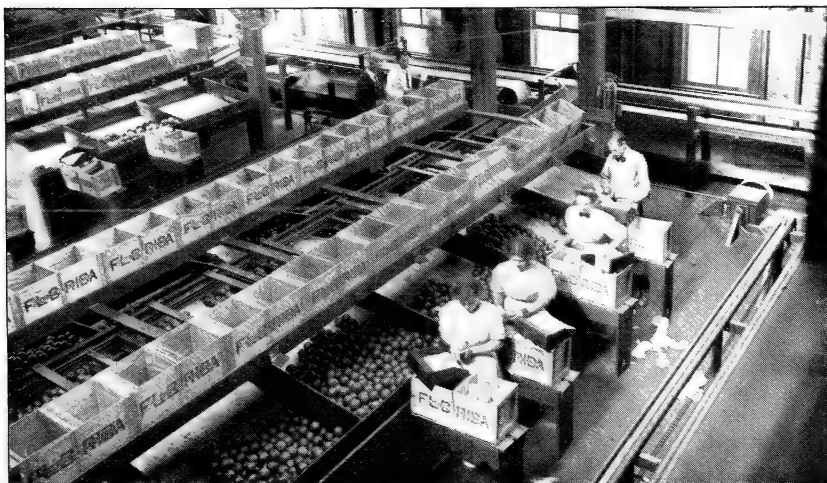
## Picking, Packing and Marketing

Between the tree and the final market, profits may be conserved or thrown away faster than at any other stage of the industry. A grower is entitled to **every cent** of profit his crop can be made to yield. Unfortunately, many growers utterly fail to realize the relation of picking and packing to profits. Carelessness in picking and handling and a slovenly pack are fatal to profits.

The Florida Citrus Exchange has done much to improve these conditions and to educate the growers along progressive lines in picking, packing and handling. In general the Exchange watchword, "regard every doubtful Orange as a cull," is sound advice. No fruit is more susceptible to decay from bruising and rough handling. By the simple expedient of using cotton gloves when picking and packing, California growers saved ten per cent in rot, and ten per cent meant 4,500 carloads. Members of the Florida Citrus Exchange have had a like experience.

The following rules should govern the grower who would attain success: All pickers should be supplied with gloves to prevent finger-nail abrasions. Only clippers which cut a short stem without harming fruit should be used.

Picking receptacles which will hold the fruit without pressure, and which can be emptied into the field boxes without jarring the fruit, should be provided.



Packing Oranges at Winter Park, Fla., Citrus Exchange packing-house



# Buckeye Nurseries



Buy by the box. Note the brand

The field boxes should be high enough at the ends to rest one on top of another without bringing the fruit in the under box in contact with the bottom of the box above.

A spring wagon should be used for hauling fruit from grove to packing-house.

No fruit showing an abrasion of any kind should be tolerated.

Packing is a study in itself. Experience alone can give the grower the knowledge and skill requisite to produce a fancy or even a good pack. And the relation of pack to profits is very close. Our advice is to visit the nearest good packing-house—a house which has won a reputation for its pack—and study the subject under an expert there, and then, if you have not already done so, join the Florida Citrus Exchange.

The bane of the Florida Citrus business has been the method of marketing which has prevailed since the beginning. Until the advent of the

Florida Citrus Exchange the grower was at the mercy of the big dealers. For years he was but a shuttle-cock and his product was handled first by one bad system and then by a worse. The more careless men, who would not lend a dollar to a neighbor without ample security, were content to turn over their entire crops—the result of years of toil and sacrifice to some concern a thousand miles away with no other security than their promise to give the shipper a square deal. In some cases they got it—but many, *too* many times, they got but a small part of what rightfully was their share of the proceeds.

Another class, realizing the risk of consigning, sold on the tree and frequently the returns from a grove were so satisfactory, even at a low price per box, that the grower would content himself with the thought that he had done well—let the other fellow make something. But why shouldn't the grower make it *all*? What interest has he in this "other fellow?" Why should he slave for years to make a grove, and then divide his income with this useless middle-man? We contend that the grower should get *every penny* his crop sells for, above the actual cost of harvesting and marketing, and thanks to a few bright, honest, intelligent, bound-to-succeed men, a way has been provided whereby *every* grower, with one acre or a thousand, may secure the services of an organization which treats all alike, and returns you every dollar your fruit sold for after the legitimate expenses have been deducted. An organization *not* for profit, as all excess charges are returned to the grower, but an organization of, by, and for the growers.

The Exchange is gradually forcing dealers into a position where the grower will get some consideration at their hands. The Exchange has forced prices up, and with proper support it will maintain them there to the benefit of all the growers of the state of Florida. We cannot do better than advise marketing



through the Exchange if there is a branch in your vicinity, and if there is not, get busy—investigate its workings, get your neighbors together and organize.

In the illustrations herewith some idea is given of modern packing methods. The old packing-shed has gone forever. The modern packing-house is supplied with every facility for rapid handling of the fruit, and in this machinery plays no small part. The human hand is not allowed to touch the fruit, all who have occasion to handle the fruit being compelled to wear gloves. And 90 per cent of the improvement in packing and packing-house equipment must be credited to the Florida Citrus Exchange.

## Profits in Oranges and Grapefruit

"What profits may I reasonably expect from my grove?" This question has been put to us times innumerable by men who were just starting groves. It is at once a fair and an unfair question. The largest factor in the question is the man. The question of profits is up to the man every time.

Given suitable land for a starter, thorough attention to the details of cultivation, fertilizing and spraying, and ordinary sound business sense in packing and marketing the fruit, and a Citrus grove will give, year in and year out, larger returns on the investment than almost anything of which we know; and this is more particularly true since the advent of the Florida Citrus Exchange.

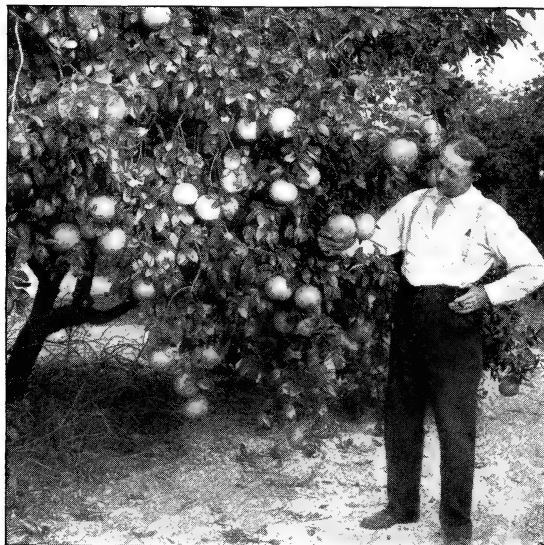
Continually we are having pointed out to us groves which are losing money or, at best, are not more than paying for their upkeep. There are hundreds of such groves in Florida. Examine any one of them. Inquire into its history and the character of the man who owns it. Nine times out of ten you will find that it is either owned by a non-resident of the state and suffers from lack of care, or by one who is lacking in energy or business ability. The so-called risk in the Citrus business is no more to be judged by the poor groves than is the stability of any grocery business by the tremendous annual list of failures.

The growing of Oranges and Grapefruit is a business, just as much a business as the selling of silks and calicoes over a counter. The same principles apply. The Citrus grower can no more sit down with idle hands and expect his trees will fill his coffers with gold than the manufacturer who knows nothing about his business or product can expect to pay dividends.

In Winter Haven is a 7½-acre grove of Oranges and Grapefruit which, for the last five years, has given its owner a net profit of over \$4,000 annually (for 1912, \$5,100 above all expenses). And this is from a grove which has not yet reached maturity—the production of which is increasing.



Delivered at home—same brand



"Diamond K." Koplin among his pets

In this same district as high as \$50,000 has been offered, and refused, for twenty acres of mature grove, and the man who made this offer expected a fair annual interest on the investment. The grove is now paying 75 per cent on this amount.

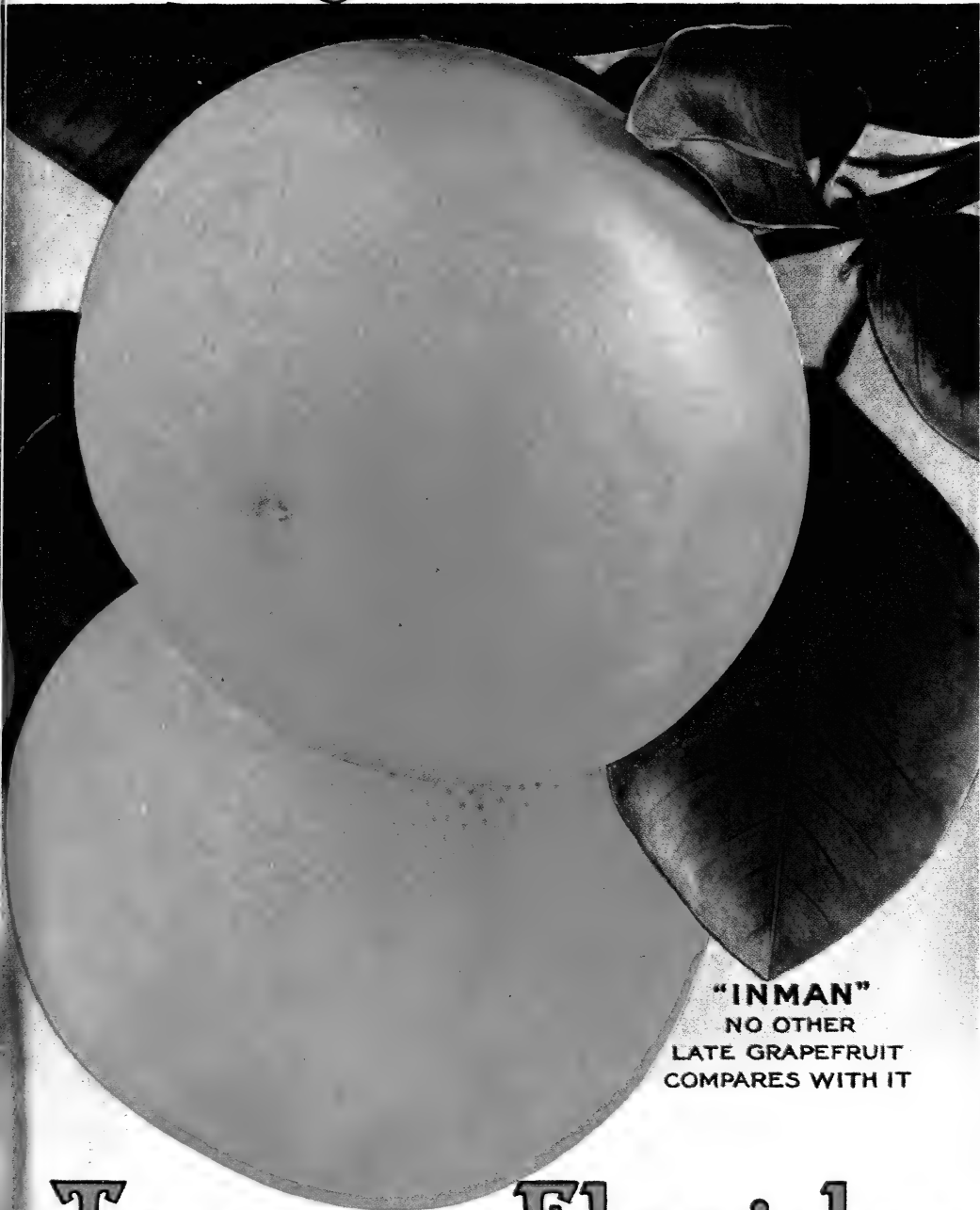
The following table will give a conservative estimate of the profits which may reasonably be expected from a well-situated, well-managed and well-cared-for grove of Grapefruit. This table is based on an acre unit, seventy trees to the acre. The calculations assume, of course, that the trees will be of

Buckeye quality, pre-

ferably of the five- to seven-foot grade, or two-year-old buds on five-year roots when planted, and that the right fertilizer will be used and applied at the times which the experience of successful growers has shown to be best.

<b>First Year.</b> —Cost of clearing and plowing one acre.....	\$30 00	
Cost of 70 two-year budded trees, \$1.50 each.....	105 00	
Fertilizer.....	6 00	
Labor.....	50 00	
Returns.....		None
<b>Second Year.</b> —Labor in care and cultivation.....	50 00	
Fertilizer.....	12 00	
Returns.....		None
<b>Third Year.</b> —Labor in care and cultivation.....	50 00	
Fertilizer.....	18 00	
Returns, one-half box per tree, 35 boxes at \$2.....		\$70 00
<b>Fourth Year.</b> —Labor in care and cultivation.....	50 00	
Fertilizer.....	24 00	
Returns, 2 boxes per tree, 140 boxes at \$2.....		280 00
<b>Fifth Year.</b> —Labor in care and cultivation.....	60 00	
Fertilizer.....	30 00	
Returns, 3 boxes per tree, 210 boxes at \$2.....		420 00
<b>Sixth Year.</b> —Labor in care and cultivation.....	70 00	
Fertilizer.....	35 00	
Returns, 4 boxes per tree, 280 boxes at \$2.....		560 00
<b>Seventh Year.</b> —Labor in care and cultivation.....	80 00	
Fertilizer.....	40 00	
Returns, 5 to 7 boxes per tree, 350 boxes at \$2.....		700 00
<b>Total expense, not including price of land.....</b>	<b>\$710 00</b>	
<b>Probable returns.....</b>		<b>\$2,030 00</b>

# Buckeye Nurseries



**"INMAN"**  
NO OTHER  
LATE GRAPEFRUIT  
COMPARES WITH IT

## Tampa, Florida

## Buckeye Service to Customers



THE early care given to an Orange or Grapefruit tree fixes its whole future. Buckeye trees bear early, regularly and heavily because they are grown right.

The soil of Buckeye Nurseries is particularly adapted to the growing of Citrus-Fruit stocks. It was selected after long investigation of the soil of the entire Citrus-Fruit belt. Surrounding it are thousands of acres of bearing groves, among them our own big plantings.

In the deep, warm, sandy loam of Buckeye Nurseries, the trees produce great masses of fibrous roots, in which vigor and vitality are stored. With constant cultivation, proper fertilizing, and increasing experienced care, Buckeye trees develop in the way that they should grow.

Buckeye Seedlings are started in beds, transplanted to the nursery row, and cultivated *two years* before they are budded. The buds are selected from bearing trees that have distinguished themselves by large and regular yields. In no other way is it possible to secure trees with fixed bearing habits.

Buckeye trees are dug as carefully as they are grown. The roots never are exposed to sun or drying winds. The trees are packed and boxed under cover, loaded in cars directly from the packing-house, and reach the purchaser in perfect growing condition.

To further assist our customers in bringing Citrus-groves to maturity, Buckeye Nurseries keep experts in the field. They are traveling Citrus Florida constantly, visiting the trade, inspecting groves, offering advice or suggestions when requested, and rendering any other assistance possible to planters who are bringing Buckeye trees to maturity. Very often our men find conditions existing which are easily corrected, and which, when corrected, save planters considerable time and money in producing a grove.

When we sell to a customer, we do not forget him. His success as a Citrus-grower means our success as nurserymen. We find many planters in the dark as to proper methods of cultivation, fertilization, and spraying. The benefit of our thirty-four years of experience in the Citrus industry is at the disposal of our patrons. Ours is strictly a Citrus nursery, and we cater only to the Citrus-Fruit planter. This enables us to specialize on the Orange, Grapefruit, Lemon, and Lime, and our time is devoted entirely and exclusively to Citrus-Fruit trees.

Thus the net profit on an acre in seven years is \$1,320, an average of \$187 a year, including double the expense usually incurred for fertilizer. Grapefruit has brought as high as \$6 to \$8 and even \$12 a box in the last year or two, so that the price at which this table has been computed, namely \$2 per box, is ultra-conservative. We know of one grove that, in the season of 1911-12, netted \$3 per box for its entire output of 17,000 boxes. Moreover, we have been equally conservative in our estimate of the probable yield. A Citrus tree, either Orange or Grapefruit, does not get into full bearing until it is eight to ten years old, and then often bears twenty to twenty-five boxes of fruit yearly. The estimates of yield as given in the foregoing table are far short of what may reasonably be expected.

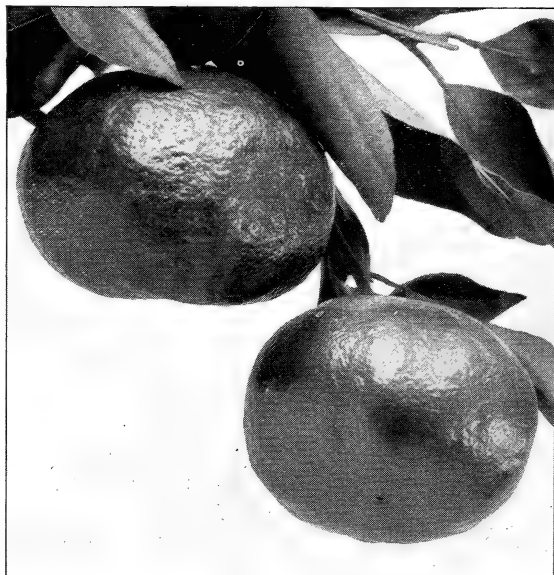
In compiling this table the cost of land was not figured in. Good Citrus land in a raw state can be bought for \$25 to \$200 an acre, according to location. A mature grove is worth from \$1,000 to \$2,500 per acre, and on the latter valuation will pay a handsome return.

The question of profits is largely a question of the man. And this leads to another point: Growing good fruit solves but half the problem of making a grove pay. A man may be an expert grower and still not reap the full returns to which he is entitled. The best fruit in the world is worthless unless it is put on the market at the right time and in the right way. Right here let us commend to every grower a careful investigation of the Florida Citrus Exchange, a growers' organization from start to finish, and the only sensible, business-like solution of the marketing problem ever offered the growers of Florida. It has brought order out of chaos, and in three years has not only put the industry on a sound business footing, but it has enhanced the value of all grove property at least 100 per cent. Let us also advise every grower or prospective grower to subscribe for the "Florida Grower," a leading exponent of the Exchange, and the best horticultural paper in Florida—address the "Florida Grower," Tampa, Florida. Its columns will keep you advised regarding all the new developments in Citrus culture and in the marketing of fruit.

## ORANGES

The general trend of the Orange business has been to concentrate more and more upon a few tested varieties which have proven money-makers in the markets. There are over a hundred listed varieties of Oranges, but the difference between many of these is so slight that there is little use in propagating all of them—and we do not.

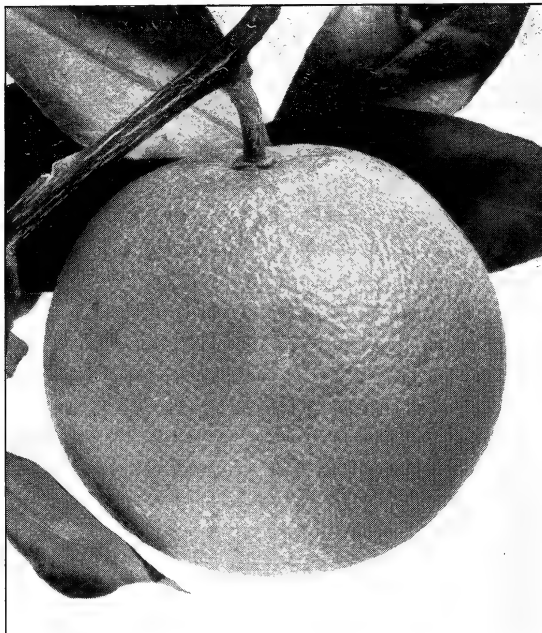
We have, therefore, confined our attention wholly to those varieties which are characteristically different. We have selected what the test of years, has proven to be the best early varieties, the best midseason varieties, and the best late varieties. We can unhesitatingly recommend these named varieties to the grower who desires a long-continued crop.



Tangerine Oranges



# Buckeye Nurseries



Parson Brown Orange

## VERY EARLY VARIETIES

### Parson Brown

No other Orange in Florida has become more popular than the Parson Brown. It is of fine texture, pleasant flavor, keeps well and ships well. It begins to ripen as early as October, and the crop comes on in a uniform way. It is one of the few Oranges which is ripe when it is green in color. In this respect it has suffered during the recent agitation against Florida green fruit. Unscrupulous growers, in order to hit the early market and high prices, shipped thousands of Oranges other than Parson Brown under the Parson Brown label. Enforcement of this law will cause the true variety to again come into its own.

The Parson Brown form is round, slightly oblong, medium to good size. It is juicy, with small pith and small seeds. We unhesitatingly recommend the Parson Brown as the best of the very early varieties, especially for locations where danger from cold necessitates early shipment.

### Boone's Early

An early variety, ripening from October to November. It is of medium size, deep yellow color, with smooth rind and abundant juice. The flavor is very good. It does not hang well, and for this reason should be shipped as soon as colored.

## Satsuma

This Orange belongs to the Mandarin, or "kid glove" group. The tree is of a spreading, dwarf habit, and will stand a considerable degree of cold. In the extreme southern part of Florida the Satsuma is of no practical value, nor is it grown to any extent in the middle citrus section of the state. For the extreme northern section, however, and for the Gulf States it has no equal. The Satsuma is of Japanese origin, and is sometimes known as the "Oonshiu" and the "Kii Seedling." The rind is but loosely attached and the flesh is easily separated into segments. It is entirely seedless, tender, juicy and delightfully flavored. It ripens in September, October and November, the small fruits ripening before the larger ones. This Orange is grown very successfully in Eastern Texas, and, because of its being the first to ripen, and its hardness, it has proven very profitable in sections adapted to it.

## MIDSEASON VARIETIES

### Pineapple

From our experience with this Orange, extending over a long period of years, we are convinced that this is one of the best all-round Oranges ever produced in Florida. It originated at Orange Lake. The tree is a strong, vigorous, upright grower, and is exceedingly prolific. The fruit is medium to large. The color is a deep orange, with a reddish tinge showing in fully ripe, well-colored specimens. The flesh is of medium grain, with abundant juice. The flavor is hard to surpass, being rich, vinous and spicy. Has some seeds, and the rind is thin. This variety might almost be classed as among the very early, for it colors as soon as the Parson Brown, but it has the advantage that it can be held on the tree until February and sometimes till March, and it is a fine shipper.

### Bahia, or Washington Navel

This is the Orange which has made the fortunes of many California Orange-growers. In Florida it has not been a great commercial success, particularly because it is not as prolific here as on the Pacific Coast, for it seems to do better under irrigation. The size is large and the color is bright. The rind is smooth, tough and leathery, and while the flesh is rather coarse, the juice

# BUCKEYE NURSERIES

M.E.GILLETT, PROPRIETOR.

OFFICES:

SUITE 1018 CITIZENS BANK BUILDING,  
TAMPA, FLA.

## CITRUS FRUIT TREES

ORANGE, GRAPEFRUIT, LEMON, LIME.

NURSERIES:

WINTER HAVEN, POLK CO., FLA.

CABLE ADDRESS "GILLETT" TAMPA.

TAMPA, FLA. Oct. 1, 1914.

Mr. E. R. Lake,  
U. S. Dept. Agriculture,  
Washington, D. C.

Dear Sir:-

In deciding on the nursery from which you will purchase your citrus trees, there are three important matters to be considered, namely; their responsibility, their reputation for furnishing stock which is properly grown and true to name, and the service rendered.

You may own the best land in Florida - you may have had it thoroughly and properly cleared and prepared - the care of your grove may have been in the hands of men of exceptional ability, but what good is all this unless your trees are right? It is the tree itself from which you will derive the profit from your investment and nothing should be spared in obtaining the very best tree on the market.

After spending four or five years of valuable time, to say nothing of money, in bringing a grove to maturity, it would indeed be discouraging to find that the trees originally purchased were not true to name, and still more discouraging would it be to go back on the nurseryman from whom the trees had been purchased only to find him out of business, or representing no financial responsibility.

For thirty-four years we have been serving the citrus growers of Florida with orange, grapefruit, lemon and lime trees. We can show thousands of acres of bearing groves supplied with Buckeye trees, which stand as mute evidence of the quality trees we grow. We confine ourselves strictly to citrus stock, feeling that thereby we can serve our customers best. We are growers ourselves, having nearly fifteen hundred acres of grove under our care and supervision.





#2

We believe our reputation for growing dependable stock, our service to our customers, our methods of doing business, our facilities for handling orders, (whether large or small), warrant us in soliciting and in believing that we merit your order, and if we are favored with it, you can depend on us for good, strong, healthy trees.

You doubtless have received catalogs from many nurseries. In making comparison of prices, please bear this in mind - the trees that we list as our 5 to 7 standard size carry a root that is fifty-one months old and a bud that is fifteen months old. The trees that we list as our 4 to 5 size carry a forty-eight month old root and a twelve month old bud and the same proportion holds good all the way down the line.

Here is the point - it has been demonstrated beyond question that the age of the root has a great deal to do with the time required for a tree to come into bearing. This aging of the root must be done either in the nursery or in the grove. We suggest that you investigate this point carefully before placing your order. We believe firmly that dollar for dollar we give better value than can be obtained elsewhere.

Thanking you in advance for your consideration of our claims, and hoping that we may have the pleasure of serving you, we remain,

Yours very truly,

BUCKEYE NURSERIES

BY

*D. C. Gillett*

DCG/4



# Tampa, Florida

## MIDSEASON ORANGES, continued

is plentiful in full, well-ripened specimens. The flavor is excellent. In poor specimens there is a tendency to dry out the juice sections at the stem. Like other navels, there is a peculiar umbilical formation on the blossom end of the fruit. Where successfully grown this fruit is a great favorite. It ripens at a medium to early date.

## Majorca

This variety had its origin on an island in the Mediterranean. It is of medium size, tender, rich, juicy and sweet. In many of its characteristics it bears close resemblance to the Jaffa. It keeps well, and for this reason has much to commend it to the shipper. The tree is a strong, bushy grower, of robust character and is nearly thornless. The Majorca is prolific and a profitable mid-season variety.

## Dancy's Tangerine

No grove should be without a few trees of the Tangerine. The color is a deep orange-red, approaching a tomato-red. This Orange belongs to the Mandarin family, and the size is small to medium. The rind separates so easily from the flesh as to seem hardly attached at all. The flavor is rich and spicy. There are a few seeds, rather small. The flesh is of a deep color and very juicy. The tree is prolific and a strong, vigorous grower. As we said before, no grower can afford to be without the Tangerine in his grove. Tangerines are shipped chiefly in straps or half-boxes, and prices have ruled good.

## VERY LATE VARIETIES

### Valencia Late

This is one of the best of all the very late varieties, and we cannot too highly recommend it for those sections where the crop can be held on the trees without fear of

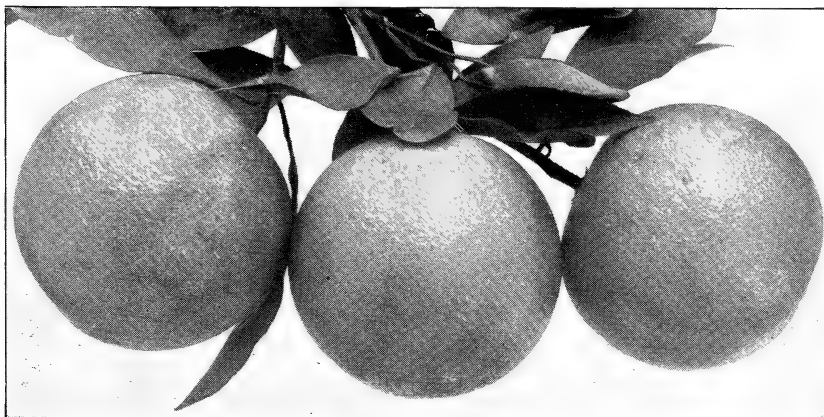
frost. Valencia Late comes into the market when practically all other Florida fruit is out, and before the California fruit comes in. The tree is a rapid grower exceedingly prolific, and the fruit is hard to equal. The flesh is a deep red-orange with delicious flavor, and as for juice we know of no other variety with which to compare it.

## Tardiff, or Hart's Late

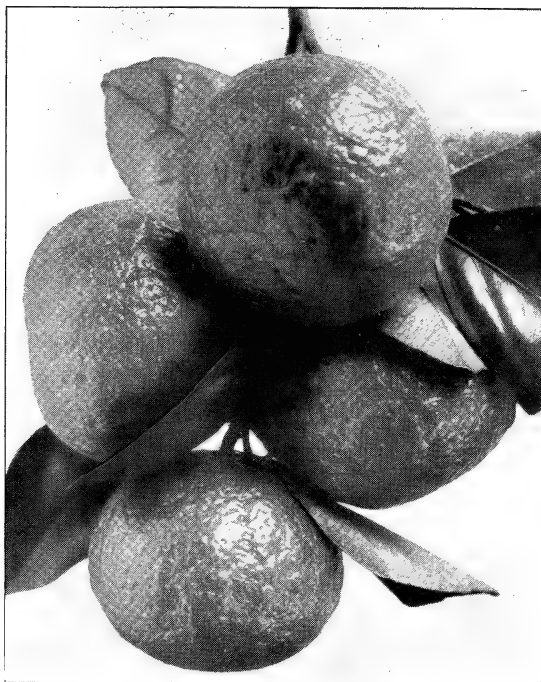
The fruit is of medium size, round or slightly oval. It has a smooth skin and is very solid and heavy. The juice is abundant and the acidity and sweetness are well combined. The flavor is distinctive and there are a few seeds. The tree is a strong, vigorous grower, spreading in character; the foliage is distinct and it has few thorns. The fruit does not ripen until April, and hangs on the tree in good condition until midsummer. We consider Hart's Late one of the very best of the late varieties. Many authorities claim that the Tardiff of Florida became the Valencia Late of California; at any rate they are very similar.

## Lue Gim Gong

A new Orange of recent introduction in Florida, and if half of what is claimed for it by the originators is true, it should prove one of the greatest money-makers which Florida has ever produced. It originated in the grove of Mr. Lue Gim Gong, in De Land, and is supposed to be a cross between Hart's Late and Mediterranean Sweet. The peculiar quality which promises so much for this fruit is its ability to hang on the tree. It is claimed for it that fruit will hang perfectly sound and juicy for two or three years, and that, in the meantime, the tree will go on blossoming and bearing. The tree is a strong grower, and it is claimed that it is exceedingly resistant to cold. There seems to be no question that the Lue Gim Gong is an exceedingly valuable acquisition, inasmuch as the hanging quality of the fruit will enable



Pineapple Oranges



**King Oranges**

## ✓ **VERY LATE ORANGES, continued**

the grower to put the fruit on the market at a time when all other Citrus fruit is out.

The size is medium to large, averaging about 150 to the box. It is oblong, rounded at the ends. The color is deep red, and it holds this color until picked. The skin is smooth and thin, but thickens somewhat when the crop is held on the trees more than a year. The flesh is divided into ten to twelve sections, easily separated, and is of a deep orange-color somewhat resembling the Tardiff. Those who have been fortunate enough to sample the Lue Gim Gong cannot say too much in its praise. It is juicy, with few seeds, and the flavor is just the blend to suit the most critical taste. Being firm and well balanced, it is a good keeper and shipper. Prices on this variety will be quoted on application.

## ✓ **Joppa Late**

This is a California variety originally obtained in Joppa, Palestine. It is an extremely late Orange and on this account is a good commercial variety. The tree is thornless and an upright, vigorous grower. The fruit is medium to large, oblong in shape, and has a thick rind. There are few or no seeds, and the pulp is juicy, sweet and of pleasant flavor.

## ✓ **Ruby Blood**

This is one of the best of the Blood Oranges. Medium in size, nearly round, with thin but tough skin, and a melting pulp which is rich, juicy and of an exquisite flavor. It has few equals and no superiors. As the fruit ripens it usually becomes streaked or mottled with blood-red. Not infrequently the pulp gets so red that it shows through the rind with a reddish blush outside. We hold this as one of the valuable varieties for general use. It is nearly thornless, and is a regular bearer.

## ✓ **King**

This is the largest of the Mandarin family, and is sold as both King Oranges and King Tangerines. The fruit has the loosely adhering rind and easily separated segments peculiar to the Mandarin varieties. It is very large and flat, and the skin is exceedingly rough. It has few seeds and the flesh is deep red-orange, juicy and meaty. The peculiar aromatic flavor is very agreeable. The season is late, coming in March and April. The tree is an upright, strong grower,

with wood inclined to be brittle. The foliage is dark and rich, and the fruit, when fully ripe, is wonderfully beautiful. There is a great demand for this fruit because of its large size, with other desirable qualities.

## ✓ **Sanford's Mediterranean Sweet**

This is one of General Sanford's introductions. The size is medium to large, and the quality is exceptionally fine. The rind is smooth and the appearance is excellent. It is valuable for the grower located where he can safely grow for the late market.

## **KUMQUATS**

There are two varieties of these little fruits, the Nagami and the Marumi. Of the two, Nagami is generally considered the more desirable. It is oblong in shape and about an inch and a half in diameter. It is deep orange-yellow in color, and the delicate rind is sweet and spicy, while the pulp is tender, with an agreeable acid flavor. The Marumi differs only in size and shape of fruit. The latter is round, being about an inch in diameter. The Nagami makes a most delicious preserve, being preserved whole, the rind adding a most exquisite flavor.

## POMELO, or GRAPE-FRUIT

The Pomelo, or Grapefruit, is rapidly becoming—or is, in fact—the breakfast-fruit of America. It is only a few years ago that this fruit was considered worthless, and was comparatively unknown. The first shipments to northern markets brought only fifty cents a barrel. Today the demand is increasing faster than the supply, and first-class late fruit has brought as high as \$8 to \$12 per box. Not only is the fruit gaining in popularity for its delightful flavor, but physicians have discovered that it is one of the most healthful fruits grown, and possesses a tonic quality peculiarly its own. The appellation "Grapefruit" is given because of the grape-like clusters of from three or four to a half dozen in which it grows. Despite the fact that in recent years thousands of acres have been planted to Grapefruit, there are still great markets practically untouched by this delicious fruit.

Florida has, and is likely to hold, control of the Grapefruit market. There is a little California-grown Grapefruit, but this is not to be compared to the Florida product. Florida conditions are just adapted to the Pomelo, but even here the area suited to its culture is comparatively limited. Under these conditions, it is obvious that there is little likelihood that the market will ever be overstocked.

As an appetizer, a well-grown Grapefruit, thin-skinned and full of juice, has no equal. The partitions of the fruit contain a bitter principle of some kind, a pleasant blending of bitter-sweet and acid. It is just this blending of delicate flavors which makes the Grapefruit what it is.

Every year adds to the number of persons who use Grapefruit regularly. New uses for the fruit are found each season, and it has come to serve an important part in many culinary operations. The juice is a most refreshing drink and various methods of preserving it for out-of-season use have been experimented with, and some of them promise to be successful.

We have devoted many years to the propagation of Grapefruit, and, in offering the following select list, we believe that we have shown the very best varieties now in the market. We especially call the attention of every grower to the new Inman Grapefruit, which we believe is destined to be the greatest money-maker in Florida.

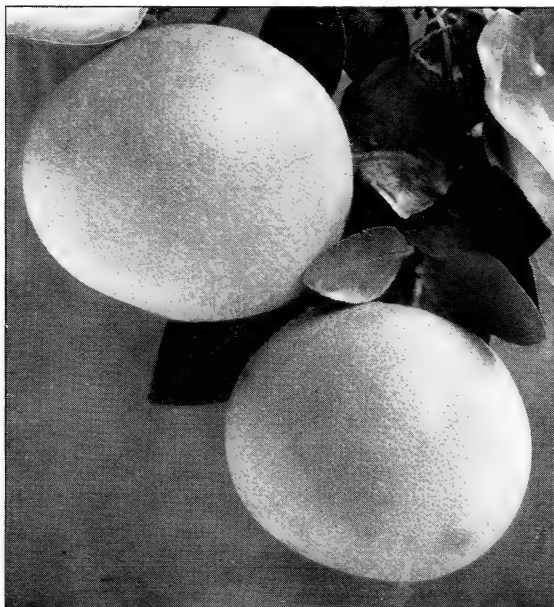
## Walters

A most vigorous grower, making a large, strong tree, and a regular, heavy bearer. The fruit hangs singly, a decided advantage to the tree, inasmuch as the branches are not over-strained by the great weight. It can be shipped in November, and is frequently held on the tree until May. The sizes run from 46 to 64 to the box, which are the most desirable sizes on the market. In flavor, thinness of skin and other desirable market qualities the Walters is unsurpassed.

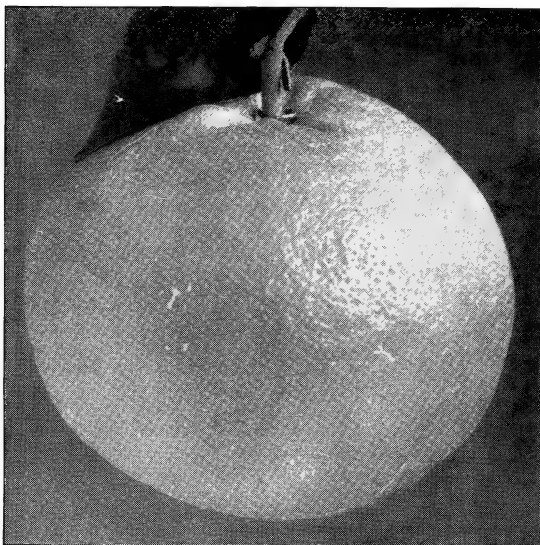
## ✓ Gillett's Late

This is one of our favorites, and wherever we have introduced it, reports have been most enthusiastic. It is harder than any other sort; for this reason it is especially adapted to the northern limits of the Grapefruit belt. The tree grows to an immense size, with dense foliage and few thorns. It is adapted to all classes of land, and has made a remarkable showing on light soils. It bears young and is exceedingly prolific.

Gillett's Late has won for itself an enviable reputation. The fruit is medium to large, with very smooth skin of silvery yellow. The skin is thin, and the texture all that could be desired. There is very little "rag." The average size is about 54 to the box, running a little lower than this on old trees. Because of its lateness in ripening it is not in the best shipping condition until February, and will hang on the trees in perfect condition until as late as June.



Gillett's Late Grapefruit



**Walter's Grapefruit**

## ✓ Connor Prolific Pomelo

This fruit is rather silvery in color, bright and glossy. The area covered by the tree is immense. Fruit is borne singly rather than in clusters, and runs from 46 to 54 to the box. The skin is smooth and thin. The flesh combines all that is best in a true Grapefruit.

## ✓ Inman

This magnificent Grapefruit is illustrated on the colored insert facing page 24. It is remarkable in many respects, and in introducing it we take a very great pleasure because of the fact that the original tree was secured by the late Dr. F. W. Inman, after whom we have named the fruit. Florida owes much to Dr. Inman for the position in which her citrus industry now is, and we feel that every citrus-grower will join us in the feeling that no better monument to his work can be reared than by naming so splendid a fruit after him.

Dr. Inman watched and cared for the original tree very carefully, and repeatedly told the writer that he considered it the best late Grapefruit he had ever seen. On several occasions he shipped the fruit in June, and they arrived as fresh and sound as February shipments. We were fortunate in securing the buds from this original tree, and are now in a position to offer strong trees on three- and four-year-old roots. The Inman is a regular bearer. It rarely clusters, the fruit being well distributed all over the tree, especially on the inside. The size is

medium to large, with smooth, tough skin of very bright yellow, particularly on sprayed trees. The shape is flat, which makes it a good seller, and the size is medium to large, running from 46 to 64 to the box, the bulk being from 54 to 64. It is a splendid shipper, and can be held safely until mid-July or August, and even later. It blooms at the usual time, but possesses to an exceptional degree the "hang-on" qualities. The flesh is delicious, a blend of all the qualities which have made Florida Grapefruit the breakfast-fruit of the world.

For any location where late fruit is desired we unhesitatingly recommend the Inman. We know of no other variety to compare with it. These statements are not based upon guesswork. The Inman was introduced last year for the first, but it has been under close and careful observation for several years. It will prove of great value to those who can safely hold it until the late spring or summer for market. Like the Lue Gim Gong Orange it will go on the market at a time when there is no other fruit, which means an extra good price to the grower. We urge every grower to give the Inman a trial.

Do not fail to plant the Inman this year. It is the coming Grapefruit of Florida, and ultimately will have a place in every grove and garden.

The Bureau of Plant Industry of the United States Department of Agriculture writes under date of March 7, 1913, concerning the famous Inman Grapefruit (Pomelo) as follows:

*"We are glad to bear such favorable report of the Inman Pomelo. This remarkably fine fruit created much favorable comment in this office. We found this to be one of the best Pomeles that we have received here, and it is certainly promising for the Pomelo industry in Florida."*

## ✓ Marsh Seedless

This is one of the most popular varieties, largely because it is nearly seedless, there seldom being more than three or four seeds to the fruit—frequently none at all. The fruit is of large size, of roundish form and slightly necked at the base. The color is lemon-yellow, and the surface of the skin is smooth. The flesh is very juicy. The flavor is excellent. It is ready for shipping in February and March, and always finds a ready market.

## LIMES

Limes have not received the attention in Florida which they merit. They are even more tender than the Lemon, but there are many sections of the state in which they may be successfully raised at a good margin of profit. For some years we have grown them at Winter Haven, and cannot begin to supply the demand at \$5 per box. Limes are coming into favor rapidly, especially for summer drinks. In the sections in which they can be grown, no fruit more deserves the attention of growers who wish to make money. We advise growing Limes in these localities.

### Tahiti, or Persian

This is one of the best, if not the best, of the Limes. The fruit is handsome and as large as a fair-sized lemon. It is of a most delicious flavor, thin-skinned and contains more juice than a lemon. The trees are strong, vigorous growers and are nearly thornless and seedless. In our opinion this is the most desirable of all the Limes, and we strongly urge growers who are located in the southern part of the state, or in the lake sections, where little is to be feared from cold, to put in a few Tahiti Limes.

## LEMONS

What the future of the Lemon industry in Florida may be it is difficult to say. Before the "great freeze" of 1894-95 Lemon-growing had obtained an important place in Florida fruit-growing, no less than 140,000 boxes being shipped in a single season. The freeze was a blow from which the industry has never recovered. The Lemon is more tender than the orange, and for this reason growers fight shy of it. However, this fruit is being grown to some extent in the southern part of the state, and there is no reason why it should not be made to pay handsomely in this section, even better than Oranges. Growers have been turning their attention so exclusively to Grapefruit that the Lemon has been neglected. Cuba is splendidly adapted to Lemon-growing, and there is no reason why growers there should not compete successfully with California for the market which Europe has so long controlled, sending us annually over four millions of boxes at high prices. Our Lemon

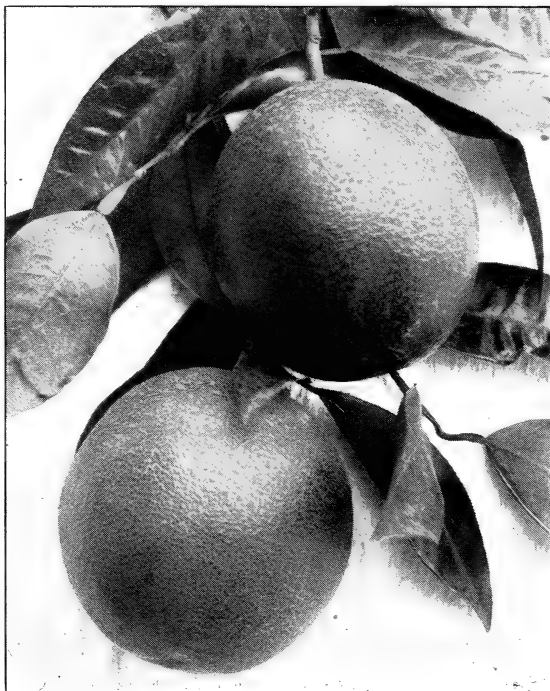
stock has been carefully selected, and the trees we offer are strong and full of vitality. None better grown in Florida.

### Seedless Villa Franca

We now propagate this one variety only. We have fruited all of the leading varieties, and have found this one so far superior to all others that we grow no other. This Lemon originated near Dunedin, Florida. It closely resembles the Villa Franca, but is somewhat smaller and practically seedless. In fact, many specimens have no seeds at all. We regard this as, beyond question, the best of all Lemons.

The prices in this catalogue are for the trees and plants, carefully packed and delivered f.o.b. cars at nursery shipping points. No charge for boxing or packing.

All transportation charges are to be paid by the purchaser, and our responsibility ceases upon delivery, in good order, to forwarding companies. Claims for losses or damages must be made upon the latter. We will, however, start a tracer for delayed shipments, if notified, and use every means at our command to secure prompt delivery, or recovery in case of damage or loss.



Valencia Oranges

## Price-List, 1913-14

F.O.B. NURSERY, WINTER HAVEN

### Oranges, Lemons and Limes

Grade	Each	10	100	1,000
1 to 2 feet.....	\$0 35	\$3 00	\$25 00	\$200 00
2 to 3 feet.....	45	4 00	35 00	320 00
3 to 4 feet.....	55	5 00	45 00	420 00
4 to 5 feet.....	75	6 50	60 00	550 00
5 to 7 feet.....	85	7 50	70 00	650 00
2 years.....	1 75	15 00	125 00	1,000 00

### Grapefruit and Tangerines

Grade	Each	10	100	1,000
1 to 2 feet.....	\$0 50	\$4 50	\$40 00	\$350 00
2 to 3 feet.....	75	6 50	50 00	450 00
3 to 4 feet.....	1 00	8 50	65 00	600 00
4 to 5 feet.....	1 50	12 50	85 00	750 00
5 to 7 feet.....	2 00	15 00	125 00	1,000 00
2 years.....	3 00	25 00	200 00	1,500 00

Inman Grapefruit will be sold at an advance of 25 per cent on above list, except when included with other orders, when list prices will apply.

### Lue Gim Gong Orange

Grade	Each	10	100	1,000
2 to 3 feet.....	\$0 70	\$6 50	\$60 00	\$600 00
3 to 4 feet.....	90	8 00	75 00	750 00
4 to 5 feet.....	1 10	10 00	90 00	900 00
5 to 7 feet.....	1 40	12 00	115 00	1,150 00

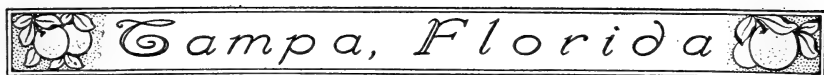
The average caliper of Grapefruit trees and the standard varieties of Orange and Lemon trees is about as follows:

- 1- to 2- and 2- to 3-foot grades sold by height alone.
- 3- to 4-foot grade will caliper  $\frac{1}{2}$  to  $\frac{5}{8}$  inch.
- 4- to 5-foot grade will caliper  $\frac{5}{8}$  to  $\frac{3}{4}$  inch.
- 5- to 7-foot grade will caliper  $\frac{3}{4}$  to 1 inch.
- 2-year, branched, will caliper 1 to 1  $\frac{1}{4}$  inches.
- 3-year, heavily branched, will caliper 1  $\frac{1}{4}$  to 2 inches

We reserve the right to sell either by caliper or height. The Mandarin King, Tangerine and Satsuma Oranges as well as Lime trees, being of much more slender growth, will not caliper so large as the above.







## Shipments

Inasmuch as planters are frequently not in a position to arrange for getting shipments through the custom house, either here or in Havana, we will have our brokers at each port attend to everything, prepaying all charges to the nearest port or railroad station, on the following terms:

### On Shipments to Cuba and the Isle of Pines

On orders ranging from \$5 to \$10.....	add 30	per cent
On orders ranging from \$10 to \$25.....	add 25	per cent
On orders ranging from \$25 to \$50.....	add 20	per cent
On orders ranging from \$50 to \$100.....	add 15	per cent
On orders amounting to over \$100.....	add 12½	per cent

### On Shipments to Porto Rico and Other West Indian Islands

On orders ranging from \$5 to \$10.....	add 40	per cent
On orders ranging from \$10 to \$25.....	add 30	per cent
On orders ranging from \$25 to \$50.....	add 25	per cent
On orders ranging from \$50 to \$100.....	add 20	per cent
On orders amounting to over \$100.....	add 15	per cent

If the above estimate exceeds the actual cost of transportation, port and custom-house charges, we agree to return the excess to our customers.

## Additional Information on Sizes of Trees and Grades

The different grades of all trees—Oranges, Grapefruit, Lemons and Limes—consist of the following ages of roots and buds:

- 1 to 2 feet carries 10-month bud, 30-month root.
- 2 to 3 feet carries 10-month bud, 30-month root.
- 3 to 4 feet carries 12-month bud, 36 month root.
- 4 to 5 feet carries 12-month bud, 48-month root.
- 5 to 7 feet carries 15-month bud, 51-month root.
- Two-year carries 24-month bud, 60-month root.

## Number of Trees or Plants to the Acre

Distance apart, feet	No. of trees	Distance apart, feet	No. of trees
1 by 1.....	43,560	15 by 15.....	193
2 by 2.....	10,890	16 by 16.....	170
3 by 3.....	4,840	17 by 17.....	150
4 by 4.....	2,722	18 by 18.....	134
5 by 5.....	1,742	19 by 19.....	120
6 by 6.....	1,210	20 by 20.....	108
7 by 7.....	888	25 by 25.....	69
8 by 8.....	680	30 by 30.....	48
9 by 9.....	537	35 by 35.....	35
10 by 10.....	435	40 by 40.....	27
11 by 11.....	360	45 by 45.....	21
12 by 12.....	302	50 by 50.....	17
13 by 13.....	257	60 by 60.....	12
14 by 14.....	222		

## Notice

For all kinds of spray mixtures, send to the Florida Agricultural Experiment Station. Ask for Bulletin No. 76.

# CAMPBELL

Supplies the

Automatic Dumps

Washers and Brushers

Dryers and Sizers

and all other Fruit Packing House Equipment used in nine-tenths of the up-to-date houses in Florida.

Do not go to the trouble and expense of raising first-class fruit, and then get less than its value on account of improper handling. Fruit put up with our equipment commands the extreme market prices.

**J. P. CAMPBELL**

**Jacksonville**

**Florida**

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USE AND RECOMMEND

**Hagan Gas and Oil  
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Irrigation Sprinklers**

AND ALL THEIR WATERWORKS AND  
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**Jacksonville** **Florida**

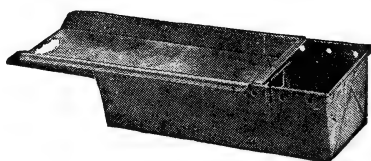
State Agent and Distributor Hagan Gas and Oil Engines,  
Novo Gas Engines, Gould's Efficient Power Pumps,  
Friend Spraying Machinery. Manufacturer Modern  
Fruit-Packing-House Machinery and Campbell Auto-  
matic Irrigation Sprinklers.

# Before You Place Your Order

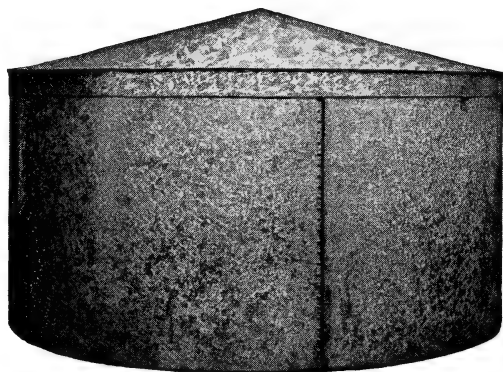
For any kind of a galvanized iron tank, it will pay you to state your wants to us. We are the leading manufacturers of galvanized iron tanks in the state of Florida, and will promptly supply literature describing the distinct features that go to make all "Nash Tanks" the very best that manufacturing art can produce.

**GUARANTEED FULL-  
MEASURE TANKS**

**PROMPT DELIVERY AT LOW  
FREIGHT RATES**



**AGENTS FOR THE  
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**TANKS  
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The "Nash System" of oil storage for smudge-heater use is being successfully used by many of the leading fruit- and vegetable-growers throughout Florida, and is the best system yet known. Write for tank information and patronize Florida industry.

**C. NASH & SON, Daytona, Florida**

# SCHNARR'S Insecticide Spray

**K**ILLS every white-fly, larva, scale, and rust mite that are hit. Removes sooty mold completely, and does not injure the white-fly fungi or the tenderest growth of the tree.

State agents for the famous Bean Power Sprayers, Hand Pumps and St. Mary's Gas Engines from 1½ to 450 Horse Power.

## *We Carry in Stock*

*Schnarr's Insecticide*

*Schnarr's Lime-Sulphur Solution*

*Grasselli's Paste and*

*Powdered Arsenate of Lead*

*Grasselli's Bordeaux Mixture*

*Bean's Power Sprayers and Hand Pumps*

*Bamboo-Aluminum Extension Rods*

*8-, 10-, 12- and 14-foot lengths*

*7-ply High-pressure Hose*

*We are agents for, and guarantee satisfactory results with, P. & W. Sulphurous Acid for foot-rot*

*Blue Stone*

*Caustic Soda, 98 per cent pure*

*Good's No. 3 Whale-oil Soap*

**J. SCHNARR & COMPANY**  
MANUFACTURERS      ORLANDO, FLORIDA

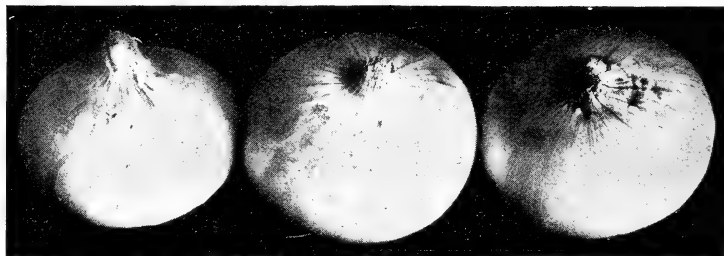


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#### ***We Keep a Complete Information Bureau***

Invaluable to newcomers. Conducted by an expert who knows crops most suitable for your soil. Write him before putting in your crop.

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Cauliflower  
Bermuda Onion

Watermelon  
Celery, Lettuce  
Tomato

Cantaloupe  
Cucumber  
Eggplant

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Beggar Weed, Velvet Bean,  
Cowpeas, Soja, Chufas, Sorghum, Millets.

#### ***Grasses***

Rhodes, Natal, Bermuda.  
Poultry Supplies, the largest stock in Florida.

Agents for Lee — Conkey's — Pratt's —

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**Your success is our success. That's why we want to talk it over**

Catalogue mailed on request, or bulletins on the following: Bermuda Onions, Cauliflower, Dasheen Culture, Pansy, Poultry Diseases.



**SEEDS & POULTRY SUPPLIES**



# Fifty Years' Unparalleled Record, Both in the Field and With the Stations **THE MAPES MANURES**

## IN THE FIELD

The record of the Mapes Manures in the field is too well known among our thousands of customers and friends (and with us we are glad to say the terms are practically interchangeable, as most of our good old customers have become our friends) to require more than a reference to it.

## WITH THE EXPERIMENT STATIONS

We are equally proud of our record with the stations. There may at times have been an occasional chance analysis which was not quite what we would have liked to have seen, and not as we believed fairly representative of our goods, but with the grand average we have no fault to find.

This is in spite of the fact that station methods and valuations from the very nature of the case must be broadly general to apply to the general average of the class of goods examined, and can therefore never be expected to do entire justice to the user of particularly choice materials and unusual methods of manufacture.

From the annual report of the Connecticut Agricultural Experiment Station, FERTILIZERS, 1912 (The Connecticut Station is not only one of the oldest in America, but enjoys a national reputation for the thoroughness and accuracy of its reports.):

"MAPES FORMULA AND PERUVIAN GUANO CO'S fifteen brands all fully meet their guarantees, with the exception of No. 553, in which a deficiency of 0.37 per cent of Potash is fully offset by an over-run of 0.7 per cent Nitrogen."

So strong a statement is not and could not be made of any firm which had an equal or a greater number of brands.

From Annual Bulletin No. 143, December, 1912, Massachusetts Agricultural Experiment Station. Inspection of Commercial Fertilizers (It publishes a table giving summary of results of analyses of complete fertilizers as compared with manufacturers' guarantees.):

"MAPES FORMULA & PERUVIAN GUANO CO. Number of brands analyzed, 18; number equal to guarantee in commercial value, 18."

That is, every one of the Mapes brands are found to be equal to their guarantee in commercial value, and of no other company having an equal or a greater number of brands can this be said.

It is unnecessary to say that the Mapes Manures have always been, and will always continue to be, while under the same management, far above the average of fertilizers offered for sale.

In speaking of this management, it is certainly interesting that not only have the Mapes continued successively in the business for three generations, grandfather, father and son, but the Lanes, who have been associated with the Mapes from the start, follow the same identical record in the business, grandfather, father and son, successively, and we ask—can our friends and customers have a better guarantee than this family management that everything has been done and will continue to be done to make the Mapes Manures as good as the present knowledge of fertilizer science permits for the crops for which they are intended?

From the "Florida Grower," May 24, 1913: "This record has made the Mapes Fertilizers universally recognized today, as they have been for years, the standard in Florida, and when a competitor wishes to give the highest praise to its own goods the usual form it takes is—they are just as good as Mapes'."

The Mapes business had its inception in the scientific research and experiments of Professor James Jay Mapes, and scientific research and experiment, coupled with the most exact practical experience, have been the dominating factors in the Mapes business to the present day.

*The Mapes Manures have been used exclusively  
in the Buckeye Nurseries for twenty-seven years*

# *The* FLORIDA GROWER

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Covers every subject. Tells how and when to plant. The care, culture and handling of citrus fruit. The soils and their treatment.

## EVERY WEEK

some newsy, timely article on Florida crops, the markets, picturesque and thriving towns in different sections of the state. Answers its subscribers' questions gladly and freely. Tells

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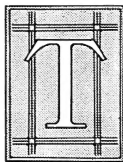
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# Orders and Dollars



HERE are two big ends to your business, the producing and the selling, and you must have equal efficiency in each. To do this the best equipment and service attainable are necessary. Granting your product is right, which it must be, you should use the best possible method of marketing it. This book, which was planned and made entirely by us, is one of the up-to-date methods used by The Buckeye Nurseries to distribute their trees. Look it over and you will be convinced that it will bring results.

We believe the aim of all publicity—advertising, catalogue or follow-up literature—is to bring orders and dollars, so getting down to brass tacks it's the increase in the bank-account that tells the real results. Now then, granting always that you know the producing end of your business, and you want a growing bank-account, we believe that the place where we can truly serve you is in the half of your proposition that deals with the marketing; that is, in the preparation and placing of advertising, the planning and printing of sales literature of all kinds, in technical advice regarding follow-up and correspondence, in sales assistance along many lines and coöperating with you to get the best results from salesmen and dealers.

That we can do this we know, because our people are familiar with the South and its problems, and because under one roof and one management we have a complete advertising agency organization and modern photographic, engraving, electrotyping, printing and binding equipment.

The following are some of the clients we have served in Florida; ask them what we have done and put your proposition up to us.

Board of Trade, Miami, Florida  
Board of Trade, Winter Haven,  
Florida

Florida East Coast Realty Co., Fort  
Pierce, Florida

Florida Grower Publishing Co.,  
Tampa, Florida

Florence Villa Fruit Co., Florence  
Villa, Florida

Florence Villa Hotel (W. H. Boal,  
Mgr.), Florence Villa, Florida

J. Walter Pope, Real Estate, Winter  
Haven, Florida

Earl C. May, Sales Mgr., Florida  
Lake Land Homes Co., and  
Georgia and Florida Land Co.,  
Auburndale, Florida

Lucerne Park Fruit Association,  
Tampa, Florida

Miller & Gossard (Summit Nurser-  
ies), Monticello, Florida

E. O. Painter Fertilizer Co., Jack-  
sonville, Florida

Terrell Land & Development Co.,  
Terrell, Florida

Wauchula Development Co.,  
Wauchula, Florida

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Catalogue and Price List Citrus Fruits